



CHANDLER FIRE DEPARTMENT

PLAN REVIEW GUIDE FOR FIRE ALARM SYSTEMS



PROJECT NAME: _____ CITY LOG #: _____
PROJECT ADDRESS: _____ CONTRACTOR: _____
CONTACT PERSON: _____ TELEPHONE #: _____

Fire alarm system installation information shall be provided on the appropriate architectural and electrical drawings. A copy of this guide shall be attached to submitted drawings. **A review will not be conducted without this guide being submitted with the drawings.**

The following items shall be included on the drawings. Place initials beside each item to indicate information is included on or submitted with the drawings. Place N/R for items not required by the code. Place N/A for items non-applicable.

1. Fire Department "General Notes to the Contractor" is provided on the plans.
2. One copy of the site plan approved by the City of Chandler Development Services Division
3. Equipment location and floor plan drawing showing:
 - _____ A. Location Dimensioning of Devices (Pull Stations, Tamper Switches, Detector, Etc.)
 - _____ B. Location Dimensioning of Appliances (Bells, Horns, Etc.)
 - _____ C. Type of Devices and Appliances
 - _____ D. Control Location(s) (FACP, Annunciators, Transmitters, Transponders, Etc.)
 - _____ E. Type of Control
 - _____ F. Ceiling Shape and Surface Cross Sections or Note at Detector Locations (Level Shape, Smooth Surface, Etc.)
 - _____ G. A Symbol List (With Equipment Identification) Showing:
 - _____ 1. Symbols Used On Drawings
 - _____ 2. Symbol Description
 - _____ 3. Device Manufacturers, Make and Model Number
 - _____ 4. Linear Footage Detector Rating for Spacing in "High Air Movement Areas" If Applicable
4. An Elementary Wiring (Riser) Diagram Showing:
 - _____ A. Arrangement of ALL Devices and Appliances with Respect to Control Units and FACP
 - _____ B. Typical Data On:
 - _____ 1. Control Panel
 - _____ 2. Power Supply Circuit
 - _____ 3. Alarm Initiating Circuits
 - _____ 4. Alarm Indicating Circuits
 - _____ 5. Ancillary Functions (HVAC Shutdown, Elevator Recall, Door Closures, Etc.)

- _____ C. Zone Configuration and Identification (As It Will Appear on FACP and/or Annunciator) for Each Zone
 - D. System Primary and Secondary/Stand-By Electrical:
 - _____ 1. Power Source and Voltage
 - _____ 2. Connection to System
 - _____ 3. Electrical Power to System
 - E. Alarm Circuit Load Consumption of All Circuits to Include:
 - _____ 1. Voltage Drop
 - _____ 2. Acceptable Limits
 - _____ 3. Quantity of Signaling Appliances on Furthest Circuit and Current Consumption
 - _____ 4. Length of Furthest Circuit and Resistance of Wire or a Note Specifying Maximum Circuit Length
5. A point to Point System Wiring Diagram Showing:
- _____ A. Interconnection of ALL Devices and Appliances
 - _____ B. External Connection of Modules in Control Panel
 - _____ C. Conduit Connection and Size
 - _____ D. Type, Size, Manufacturer's Name, and Approved List of Wire or Cable

Any of the following items required by code/standards, or which are otherwise part of the design, SHALL be included on the drawings. Place your initials beside applicable items to indicate necessary information is included on or submitted with the plans.

- 6. Detector Protection in Air/Heat Ducts
- 7. Detector Activation of Magnetic Door-Releasing Hardware
- 8. Detector/Fire Alarm System Activation of HVAC Shutdown
- 9. Fire Sprinkler Supervisory/Tamper Switch Connection to Fire Alarm System
- 10. Sprinkler tamper switch is to cause light and buzzer indication at annunciator panel and at the remote supervision site when such is required. Activation of tamper alarm shall not cause operation of door, chimes, bells, or sprinkler flow alarm.
- 11. An information plate reading "LOCAL ALARM ONLY - THIS ALARM DOES NOT SUMMON THE FIRE DEPARTMENT - IN CASE OF FIRE CALL FIRE DEPARTMENT AT 9-1-1" is installed at each manual pull station for a local alarm system.
- 12. Manual fire alarm boxes (pull stations) shall be at every exit on every floor.
- 13. Fire alarm system voice speakers/audible devices are being used for purposes other than evacuation only when allowed by the code.
- 14. Emergency telephones with individual cabinets for use by the Fire Department (Or other emergency responders) are installed.
- 15. The alarm annunciator shall be positioned in a location approved by the Fire Department.

Place your initials beside the appropriate answer for item 16.

- 16. Yes___No___Will there be any STORAGE, USE, HANDLING, DISPENSING, OR MIXING of any hazardous materials, or flammable or combustible liquids inside the building?

Complete items 17 through 23 if you answered "YES" to item 16. Place your initials beside each item that applies, or place "N/R" after any item not required by the fire code. Please note that if the item applies, information pertaining to the item shall be included on or submitted with the drawings.

17. A manual pull station or approved emergency signal device is shown outside of each interior exit door of hazardous material storage buildings, rooms, or areas.
18. Activation of the manual pull station or device shall sound a local alarm
19. Manual alarm, emergency signal, detection or automatic fire extinguishing systems (including fire sprinklers) shall be supervised by an approved central, proprietary or remote station service; or shall initiate an audible and visual signal at a constantly attended location.
20. A smoke detection system shall be provided in rooms or areas where highly toxic compressed gases are stored indoors, and activation shall sound a local alarm.
21. A smoke detection system shall be installed in all liquid and solid oxidizer storage areas (except when stored in detached storage buildings with an automatic fire extinguishing system) and shall sound a local alarm.
22. An approved automatic smoke-detection system shall be provided when the amount of hazardous materials stored, dispensed, handled or used in one control area exceeding exempt amounts specified in Fire Code.
23. When hazardous materials rated 3 or 4 in accordance with Fire Code are transported through exit corridors or exit enclosures, there shall be an emergency telephone system, a local manual alarm or an approved signaling device at not more than 150 feet intervals and at each exit doorway throughout the transport route. The system shall initiate a local audible alarm and the signal shall be relayed to an approved central, proprietary or remote station service or a constantly attended location.

The following information shall be submitted as an attachment to each set of drawings submitted. Place your initials beside each item to indicate that the information has been attached.

24. Functions to take place upon operation of devices.
25. A battery calculation sheet (with all values used) showing that battery power is adequate for 24 hours of stand-by power and 5 minutes of alarm power.
26. A separate written and signed report advising that the following system requirements have been met:
 - _____ A. The system has been designed to meet all applicable Fire Code and NFPA requirements.
 - _____ B. All system components are compatible and are listed or approved as such.
 - _____ C. All calculations for the following items are complete, accurate, and adequate:
 - _____ 1. Voltage Drop of Circuits
 - _____ 2. Current Protection
 - _____ 3. Standby and Alarm Battery Calculations
 - _____ D. The system has alarm verification features are in accordance with NFPA 72.
27. Cut sheet literature describing devices, controls, appliances and other equipment, to include but not limited to information on:
 - _____ A. Device, appliance and equipment ratings and spacing requirements
 - _____ B. Device, appliance and equipment compatibility
 - _____ C. Listings /Approvals
 - _____ D. Device/Appliance/Equipment features to be utilized in the system